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EXAMINER	
RAIZEN, DEBORAH A	

ART UNIT	PAPER NUMBER
2873	

DATE MAILED: 01/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/849,506	ISHAK, ANDREW
	Examiner	Art Unit
	Deborah A. Raizen	2873

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-20 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-20 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on 19 May 2004 is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

1. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609 A(1) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

Claim Objections

2. Claims 4 and 8 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claims 4 and 8 recite "wherein said dielectric mirror further comprises a multi-layered dielectric mirror", already recited in the base claims (line 2 of claim 1 recites "multilayer" and line 4 of claim 7 recites "a plurality of ... layers").

3. Claim 10 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 10 recites the limitation "said polarizing filter layer is

molecularly bonded between said first and second ophthalmic plastic layers to avoid haze and delamination". This limitation is already recited in base claim 7 for the fourth polarizing layer.

4. Claims 13 and 20 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Independent claim 7 recites all the limitations recited in claim 13. Claim 13 therefore fails to further limit claim 11, which depends indirectly on claim 7. Independent claim 14 recites "at least 99% of blue light is blocked at up to 490 nm," which is a more narrow limitation than the limitation in claim 20 "wherein said third and fifth ophthalmic plastic layers colorized with a color discriminating grey tint limits average blue light transmission of said lens to less than 7%."

5. Claim 15 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 15 recites "wherein said first and second layer are CR-39 plastic" in contradiction to claim 14, which recites that the first and second layers are a hydrophobic overcoat and a dielectric mirror. Furthermore, claim 14 already recites that the third and fifth layers are CR-39 plastic.

6. Claim 16 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 16 recites "said first and second layers are polycarbonate,"

in contradiction to claim 14, which recites that the first and second layers are a hydrophobic overcoat and a dielectric mirror and, furthermore, that the third and fifth layers are CR-39 plastic, and in contradiction to 15, which recites "said first and second layers are CR-39 plastic."

Claim Rejections - 35 USC § 112

7. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

8. Claims 1-20 rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter that was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The limitation in claim 1 that average blue light transmission of said lens is less than 0.4% and the limitation in claims 7 and 14 that at least 99% of blue light is blocked at up to 490 nm is not disclosed or claimed in the parent application 10/000062 for the sunglass lens that comprises grey-tinted plastic (see, for example, Figure 2, in which average blue light transmission from 420 to 450 nm is greater than 1% and from 450 nm to 490 nm is about 10%). The dependent claims inherit the failure to comply with the written description requirement and are therefore rejected as well.

9. Claims 1-13 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter that was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that

the inventor(s), at the time the application was filed, had possession of the claimed invention. The limitation "angularly displaced" in line 3 of claim 1 and line 4 of claim 7 was not disclosed or claimed in the parent application as originally filed, nor is it described in the specification of the current application.

10. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

11. Claims 1-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

12. Where applicant acts as his or her own lexicographer to specifically define a term of a claim contrary to its ordinary meaning, the written description must clearly redefine the claim term and set forth the uncommon definition so as to put one reasonably skilled in the art on notice that the applicant intended to so redefine that claim term. *Process Control Corp. v. HydReclaim Corp.*, 190 F.3d 1350, 1357, 52 USPQ2d 1029, 1033 (Fed. Cir. 1999). The term "angularly displaced" in line 3 of claim 1 and line 4 of claim 7 is apparently used by the claim to mean "having a quarter-wave thickness" (applicant asserted in an interview conducted on October 7, 2004, in regard to the parent application 10/000062, that the term describes an inherent property of dielectric mirrors and agreed that it refers to quarter-wave thickness), while the accepted meaning is "in a different angular position." The term is indefinite because the specification does not clearly redefine the term. The dependent claims inherit the indefiniteness and are therefore rejected as well.

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

14. Claims 1, 2, 4, 5, 14, 15, 17, 18, and 20 rejected under 35 U.S.C. 103(a) as being unpatentable over Farwig (6,145,984) in view of Willard et al. (Instrumental Methods of Analysis, 6th Edition, 1981, pp. 67-68) or in view of the NACL website, as archived from October 8, 2000: http://web.archive.org/web/20001008003354/http://www.nacl.com/custom.htm obtained from WayBack Machine at www.archive.org, and further in view of Johansen et al. (4,878,748).

In regard to claim 1, Farwig discloses a sunglass lens (col. 1, line 13), comprising: a multilayer (inherent in the term dielectric mirror as used by Farwig, as shown by the NACL website, as archived from October 8, 2000: http://web.archive.org/web/20001008003354/http://www.nacl.com/custom.htm obtained from WayBack Machine at www.archive.org, under the heading Mirrors / Solar Radiation Control ® (SRC) and subheading Dielectric Mirrors, lines 5-7 of the first paragraph) dielectric mirror (col. 7, lines 58-64 disclose that the plastic lens is coated for tint-neutralization, and col. 5, lines 49-62 disclose that such a coating includes a dielectric mirror) for reducing glare and overall light transmission (col. 7, lines 58-64 and col. 5, lines 49-62; also, the disclosed dielectric mirror is capable of being used for this purpose because it is semi-transparent, meaning it transmits a portion of the light and reflects a portion of the light), said dielectric mirror comprising a

plurality (NACL website, lines 6-8 under Dielectric Mirrors) of angularly displaced (an inherent property of dielectric mirrors, as admitted by applicant on October 7, 2004) thin film layers (NACL website; also, dielectric mirrors are inherently constructed of thin film layers, as disclosed in Sternbergh (5,694,240, col. 3, lines 66-67)); a first layer ophthalmic plastic (col. 7, lines 45-50) colorized with color discriminating grey tint; a second layer ophthalmic plastic (col. 7, lines 45-50) colorized with color discriminating grey tint; a polarizing layer encapsulated between the first and second ophthalmic plastic layers (col. 7, lines 45-50); whereby said layers are arranged to provide a balanced light transmission profile in which substantially 100% of UV-A & B light is blocked to at least 400nm (col. 2, lines 35-40: "full protection from UV" means that substantially 100% of UV-A & B light is blocked to at least 400 nm).

However, Farwig does not disclose that average blue light transmission of said lens is less than 0.4% (the disclosure in the current application also has no embodiment that has grey-tinted ophthalmic lenses and meets this limitation). Willard et al. discloses that transmission is inversely proportional to the optical path length and the concentration of the absorbing molecules, so that the transmission of a lens can be reduced to an arbitrarily low value by making it thicker or raising the concentration of absorbing molecules. Furthermore, Farwig discloses that the overall transmitted tint of the finished composite lens may be rendered deliberately non-neutral if desired by incorporating additional tint(s) appropriate to the desired result (col. 6, lines 18-26). Alternatively, the NACL website discloses that a dielectric mirror is available in blue color, which means that it reflects blue light, thereby blocking it from the eye. Johansen teaches that it is desirable to reduce blue light transmission because even low levels of blue light irradiance can cause damage to eye health over a long term (col. 5, lines 14-52). Therefore, it

would have been obvious to one of ordinary skill in the art to increase the concentration of the blue absorbing molecules in the Farwig lens or to increase the thickness of the Farwig lens, as disclosed in Willard, or to use a blue dielectric mirror as disclosed in the NACL website, in order to make the average blue light transmission of the Farwig lens be less than 0.4 %, as Farwig discloses to be possible by addition of tints, because reducing blue light transmission to very low levels protects eye health over a long term, as taught by Johansen.

In regard to claim 2, Farwig in view of Willard or the NACL website and Johansen discloses a sunglass lens according to claim 1. However, Farwig does not disclose that the first and second layers are made of CR-39® plastic. Johansen discloses a sunglass lens in which the first and second plastic layers are made of CR-39® plastic (col. 16, lines 30-35). Furthermore, Johansen discloses that CR-39® plastic has the advantage of being easy to tint (col. 16, lines 35-39). Therefore it would have been obvious to one of ordinary skill in the art to use CR-39® plastic for the first and second layers in the Farwig sunglass because CR-39® plastic is easy to tint, as taught by Johansen.

In regard to claim 4, in the Farwig sunglass lens, the dielectric mirror further comprises a multi-layered dielectric mirror (as disclosed in the NACL website under the heading Dielectric Mirrors, lines 5-7 of the first paragraph, the dielectric mirror inherently is constructed of between 5 and 11 layers).

In regard to claim 5, the Farwig sunglass lens the multi-layered dielectric mirror further comprises at least five thin film layers (inherent, as disclosed in the NACL website, under heading Dielectric Mirrors, lines 5-7: 5 to 11 layers) vacuum deposited atop said first layer of

plastic for further reducing light transmission and glare (col. 6, lines 8-17). However, Farwig does not disclose that the dielectric mirror comprises at least six thin film layers. The disclosure in the NACL website that the dielectric mirrors, such as those of the Farwig lens, inherently have 5 to 11 layers gives a range that overlaps the claimed range of "at least six". Therefore, a *prima facie* case of obviousness exists (MPEP 2144.05 [R-1] I).

In regard to claim 14, Farwig discloses a sunglass lens (col. 1, line 13 and Fig. 1), comprising: a first layer hydrophobic overcoat (col. 5, line 65) for protection from seawater and smudging (col. 6, lines 31-34); a second layer dielectric mirror for further reducing light transmission and enhancing UV obstruction (col. 7, lines 58-64 and col. 5, lines 49-62; also, col. 6, line 47); a third layer color-discriminating grey-tinted ophthalmic plastic (col. 7, lines 45-50), a fourth polarizing layer (col. 7, lines 45-50); a fifth layer color-discriminating grey-tinted ophthalmic plastic (col. 7, lines 45-50); whereby said layers are arranged to provide a balanced light transmission profile optimum for use on the water in which substantially 100% of UV-A & B light is absorbed and with at least 99% absorption of blue light at up to 410 nm (col. 2, lines 35-40: "full protection" means substantially 100% blocking for UV and short-wave blue light; the disclosure in col. 3, line 54 that the blue transmission band is 420-460 nm shows that short-wave blue light extends to 420 nm).

However, Farwig does not disclose that the third and fifth layers are made of CR-39® plastic and does not disclose that at least 99% of blue light is blocked at up to 490 nm (the embodiment that has grey-tinted plastic in the current disclosure does not meet this limitation).

Johansen discloses a sunglass lens in which the first and second plastic layers are made of CR-39® plastic (col. 16, lines 30-35). Furthermore, Johansen discloses that CR-39® plastic has the advantage of being easy to tint (col. 16, lines 35-39). Therefore it would have been obvious to one of ordinary skill in the art to use CR-39® plastic for the third and fifth layers in the Farwig sunglass because CR-39® plastic is easy to tint, as taught by Johansen.

Willard et al. discloses that transmission is inversely proportional to the optical path length and the concentration of the absorbing molecules, so that the transmission of a lens can be reduced to an arbitrarily low value by making it thicker or raising the concentration of absorbing molecules. Alternatively, the NACL website discloses that a dielectric mirror is available in blue color, which means that it reflects blue light, thereby blocking it from the eye. Johansen teaches that it is desirable to reduce blue light transmission because even low levels of blue light irradiance can cause damage to eye health over a long term (col. 5, lines 14-52). Furthermore, Farwig discloses that the overall transmitted tint of the finished composite lens may be rendered deliberately non-neutral if desired by incorporating additional tint(s) appropriate to the desired result (col. 6, lines 18-26). Therefore, it would have been obvious to one of ordinary skill in the art to increase the concentration of the blue absorbing molecules in the Farwig lens or to increase the thickness of the Farwig lens, as disclosed in Willard, or to use a blue dielectric mirror as disclosed in the NACL website, in order to make the Farwig in view of Johansen sunglass lens block at least 99% of blue light up to 490 nm, as Farwig discloses to be possible by addition of tints, because reducing blue light transmission to very low levels protects eye health over a long term, as taught by Johansen.

In regard to claim 15, the limitation that the first and second layers (understood as the third layer and the fifth layer) are CR-39 plastic is obvious in view of Johansen, as explained for claim 14 above.

In regard to claim 17, in the Farwig sunglass lens, the second layer dielectric mirror further comprises a multi-layered dielectric mirror (as disclosed in the NACL website under the heading Dielectric Mirrors, lines 5-7 of the first paragraph, the dielectric mirror inherently is constructed of between 5 and 11 layers).

In regard to claim 18, in the Farwig sunglass lens, the second layer dielectric mirror further comprises at least five thin film layers (inherent, as disclosed in the NACL website, under heading Dielectric Mirrors, lines 5-7: 5 to 11 layers) vacuum deposited atop said third layer for further reducing light transmission and glare (col. 6, lines 8-17). However, Farwig does not disclose that the dielectric mirror comprises at least six thin film layers. The disclosure in the NACL website that the dielectric mirrors, such as those of the Farwig lens, inherently have 5 to 11 layers gives a range that overlaps the claimed range of "at least six". Therefore, a *prima facie* case of obviousness exists (MPEP 2144.05 [R-1] I).

In regard to claim 20, as explained above for claim 14, it would have been obvious to one of ordinary skill in the art to provide in the Farwig lens a color discriminating grey tint that limits average blue light transmission of the lens to less than 7%, as disclosed in Willard, because limiting the blue light transmission protects the health of the eye, as taught by Johansen.

15. Claims 3 and 16 (as understood) are rejected under 35 U.S.C. 103(a) as being unpatentable over Farwig (6,145,984) in view of Willard et al. (Instrumental Methods of Analysis, 6th Edition, 1981, pp. 67-68) or in view of NACL website, as archived from October 8,

2000: http://web.archive.org/web/20001008003354/http://www.nacl.com/custom.htm obtained from WayBack Machine at www.archive.org, and further in view of Johansen et al. (4,878,748) and still further in view of Larson (6,334,680) and Gupta et al. (5,702,819).

In regard to claims 3 and 16, the disclosure of Farwig in view of Willard or the NACL website and Johansen makes respective base claims 1 and 14 obvious. However, those references do not disclose that the first and second layers (understood as third layer and fifth layer in claim 16) are polycarbonate. Larson discloses that both ophthalmic plastic layers encapsulating a polarizing layer are polycarbonate (col. 5, lines 53-59). Gupta teaches that polycarbonates provide impact resistance (col. 1, lines 36-37). Therefore, it would have been obvious to one of ordinary skill in the art to form the lens of Farwig in view of Willard or the NACL website and Johansen with first and second plastic layers that are polycarbonate, as disclosed by Larson, because polycarbonate would provide impact resistance, as taught by Gupta.

16. Claims 6-11, 13, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Farwig (6,145,984) in view of Willard et al. (Instrumental Methods of Analysis, 6th Edition, 1981, pp. 67-68) or in view of the NACL website, as archived from October 8, 2000: http://web.archive.org/web/20001008003354/http://www.nacl.com/custom.htm obtained from WayBack Machine at www.archive.org, and further in view of Johansen et al. (4,878,748) and still further in view of Evans et al. (6,220,703).

In regard to claim 6, the disclosure of Farwig in view of Willard or the NACL website and Johansen makes base claim 1 obvious, as explained above. However, those references do not disclose that the polarizing filter layer (understood as the polarizing layer) is molecularly

bonded between the first and second ophthalmic plastic layers to avoid haze and delamination. Evans discloses a lens in which a polarizing layer is molecularly (understood as chemically) bonded (col. 5, lines 1-53) between first and second ophthalmic plastic layers (col. 2, lines 51-54). Furthermore, Evans teaches that the molecular bonding has the advantage of improving adhesion (col. 1, lines 61-67, col. 2, lines 22-32, and col. 5, lines 1-7 and 17-20). Because the molecular bonding improves adhesion, it can be meet the intended use of avoiding haze and delamination. Therefore, it would have been obvious to one of ordinary skill in the art to molecularly bond the polarizing filter layer between the first and second ophthalmic plastic layers of the Farwig in view Willard or the NACL website and Johansen sunglass lens because the molecular bonding would improve adhesion, as taught by Evans.

In regard to claim 7, Farwig discloses a sunglass lens (col. 1, line 13 and Fig. 1), comprising: a first layer hydrophobic overcoat (col. 5, line 65) for protection from seawater and smudging (col. 6, lines 31-34); a second layer dielectric mirror for reducing light transmission and glare (col. 7, lines 58-64 and col. 5, lines 49-62; also, col. 6, line 47) said dielectric mirror comprising a plurality (NACL website, lines 6-8 under Dielectric Mirrors) of angularly displaced (an inherent property of dielectric mirrors, as admitted by applicant on October 7, 2004) thin film layers (NACL website; also, dielectric mirrors are inherently constructed of thin film layers, as disclosed in Sternbergh (5,694,240, col. 3, lines 66-67)); a third layer color-discriminating grey-tinted ophthalmic plastic material (col. 7, lines 45-50); a fifth layer color-discriminating grey-tinted ophthalmic plastic material(col. 7, lines 45-50); a fourth polarizing layer (col. 7, lines 45-50) sandwiched between the third and fifth plastic layers (col. 7, lines 47-48); whereby said

layers are arranged to provide a balanced light transmission profile optimum for use on the water in which substantially 100% of UV-A & B light is absorbed and with at least 99% absorption of blue light at up to 410 nm (col. 2, lines 35-40: "full protection" means substantially 100% blocking for UV and short-wave blue light; the disclosure in col. 3, line 54 that the blue transmission band is 420-460 nm shows that short-wave blue light extends to 420 nm).

However, Farwig does not disclose that the fourth polarizing layer is molecularly bonded to said third and fifth plastic layers and does not disclose that at least 99% of blue light is blocked at up to 490 nm (the embodiment that has grey-tinted plastic in the current disclosure does not meet this limitation).

Evans discloses a lens in which a polarizing layer is molecularly (understood as chemically) bonded (col. 5, lines 1-53) to the two ophthalmic plastic layers (col. 2, lines 51-54). Furthermore, Evans teaches that the molecular bonding has the advantage of improving adhesion (col. 1, lines 61-67, col. 2, lines 22-32, and col. 5, lines 1-7 and 17-20). Because the molecular bonding improves adhesion, it can be meet the intended use of avoiding haze and delamination. Therefore, it would have been obvious to one of ordinary skill in the art to molecularly bond the polarizing layer to the third and fifth plastic layers of the Farwig because the molecular bonding would improve adhesion, as taught by Evans.

Willard et al. discloses that transmission is inversely proportional to the optical path length and the concentration of the absorbing molecules, so that the transmission of a lens can be reduced to an arbitrarily low value by making it thicker or raising the concentration of absorbing molecules. Alternatively, the NACL website discloses that a dielectric mirror is available in blue color, which means that it reflects blue light, thereby blocking it from the eye. Johansen teaches

that it is desirable to reduce blue light transmission because even low levels of blue light irradiance can cause damage to eye health over a long term (col. 5, lines 14-52). Furthermore, Farwig discloses that the overall transmitted tint of the finished composite lens may be rendered deliberately non-neutral if desired by incorporating additional tint(s) appropriate to the desired result (col. 6, lines 18-26). Therefore, it would have been obvious to one of ordinary skill in the art to increase the concentration of the blue absorbing molecules in the Farwig lens or to increase the thickness of the Farwig lens, as disclosed in Willard, or to use a blue dielectric mirror as disclosed in the NACL website, in order to make the Farwig in view of Evans sunglass lens block at least 99% of blue light up to 490 nm, as Farwig discloses to be possible by addition of tints, because reducing blue light transmission to very low levels protects eye health over a long term, as taught by Johansen.

In regard to claim 8, in the Farwig sunglass lens, the second layer dielectric mirror further comprises a multi-layered dielectric mirror (as disclosed in the NACL website under the heading Dielectric Mirrors, lines 5-7 of the first paragraph, the dielectric mirror inherently is constructed of between 5 and 11 layers).

In regard to claim 9, in the Farwig sunglass lens, the second layer dielectric mirror further comprises at least five thin film layers (inherent, as disclosed in the NACL website, under heading Dielectric Mirrors, lines 5-7: 5 to 11 layers) vacuum deposited atop said third layer of ophthalmic plastic for further reducing light transmission and glare (col. 6, lines 8-17). However, Farwig does not disclose that the dielectric mirror comprises at least six thin film layers. The disclosure in the NACL website that the dielectric mirrors, such as those of the

Farwig lens, inherently have 5 to 11 layers gives a range that overlaps the claimed range of "at least six". Therefore, a *prima facie* case of obviousness exists (MPEP 2144.05 [R-1] I).

In regard to claim 10, the disclosure of Farwig in view of Evans makes the limitation that the polarizing filter layer (understood as the fourth polarizing layer) is molecularly bonded between said first and second ophthalmic plastic layers (understood as the third and fifth layers color discriminating grey-tinted ophthalmic plastic material) to avoid haze and delamination obvious, as explained above in the rejection of base claim 7.

In regard to claim 11, the disclosure of Farwig in view of Evans and Willard or the NACL website and Johansen makes claim 10 obvious, as explained above. However, Farwig does not disclose that the third and fifth ophthalmic plastic layers are CR-39 plastic. Johansen discloses a sunglass lens in which the two plastic layers are made of CR-39® plastic (col. 16, lines 30-35). Furthermore, Johansen discloses that CR-39® plastic has the advantage of being easy to tint (col. 16, lines 35-39). Therefore it would have been obvious to one of ordinary skill in the art to use CR-39® plastic for the third and fifth layers in the Farwig sunglass because CR-39® plastic is easy to tint, as taught by Johansen.

In regard to claim 13, the limitation that the third and fifth ophthalmic plastic layers are colorized with a color discriminating grey-tinted ophthalmic plastic material (understood as grey tint only and not ophthalmic plastic material) that blocks blue light transmission of said lens to at least 99% of blue light at up to 490 nm (as understood to mean that the lens blocks at 99% of blue light; the wording of claim 13 suggests that the blue light transmission up to 490 nm is 99%, which is nonsensical in view of the limitation in base claim 7 that at least 99% of blue light is blocked and in view of Fig. 2, which shows that the blue light transmission is about 10%) is

made obvious by the disclosure of Farwig in view of Willard and Johansen, as explained for claim 7 above. If the claim is interpreted to mean that the combined effect of the tint and the other lens layers gives a lens that blocks 99% of blue light up to 490 nm, the claim is made further obvious by the disclosure of Farwig in view of the NACL website and Johansen, as explained for claim 7 above.

In regard to claim 19, the disclosure of Farwig in view of the disclosure of Farwig in view of Willard or the NACL website and Johansen makes base claims 14, 15, 17 and 18 (claim 16 is omitted from the dependency chain because its limitation contradicts claims 14 and 15) obvious, as explained above. However, those references do not disclose that the fourth polarizing layer is molecularly bonded between the third and fifth CR-39 lenses (understood as the third and fifth layers CR-39 plastic) to avoid haze and delamination. Evans discloses a lens in which a polarizing layer is molecularly (understood as chemically) bonded (col. 5, lines 1-53) between two plastic layers (col. 2, lines 51-54). Furthermore, Evans teaches that the molecular bonding has the advantage of improving adhesion (col. 1, lines 61-67, col. 2, lines 22-32, and col. 5, lines 1-7 and 17-20). Because the molecular bonding improves adhesion, it can be meet the intended use of avoiding haze and delamination. Therefore, it would have been obvious to one of ordinary skill in the art to molecularly bond the fourth polarizing layer between the third and fifth CR-39 lenses of the Farwig in view Willard or the NACL website and Johansen sunglass lens because the molecular bonding would improve adhesion, as taught by Evans.

17. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Farwig (6,145,984) in view of Evans (6,220,703) and in view of Willard et al. (Instrumental Methods of

Analysis, 6th Edition, 1981, pp. 67-68) or in view of the NACL website, as archived from October 8, 2000: http://web.archive.org/web/20001008003354/http://www.nacl.com/custom.htm obtained from WayBack Machine at www.archive.org, and further in view of Johansen et al. (4,878,748) and still further in view of Larson (6,334,680) and Gupta et al. (5,702,819). The disclosure of Farwig in view Evans and in view of Willard or the NACL website and Johansen makes base claims 7, 9, and 10 obvious, as explained above. However, those references do not disclose that the third and fifth ophthalmic layers (understood as the third and fifth layers color discriminating grey-tinted ophthalmic plastic material) are polycarbonate. Larson discloses that both ophthalmic plastic layers encapsulating a polarizing layer are polycarbonate (col. 5, lines 53-59). Gupta teaches that polycarbonates provide impact resistance (col. 1, lines 36-37). Therefore, it would have been obvious to one of ordinary skill in the art to form the lens of Farwig in view Evans and in view of Willard or the NACL website and Johansen with third and fifth plastic layers that are polycarbonate, as disclosed by Larson, because polycarbonate would provide impact resistance, as taught by Gupta.

Conclusion

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Deborah A. Raizen, Ph.D., J.D., whose telephone number is (571) 272-2336. The examiner can normally be reached on Monday-Friday, from 10:00 a.m. to 3:00 p.m. Eastern Standard Time (a part-time schedule).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Y. Epps can be reached at (571) 272-2328. The USPTO central official fax number is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. For more information, see http://pair-direct.uspto.gov. For access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or at 703-305-3028 or at 703-308-6845, or by e-mail at: ebc@uspto.gov. Additional information is available on the Patent EBC Web site at: http://www.uspto.gov/ebc/index.html.

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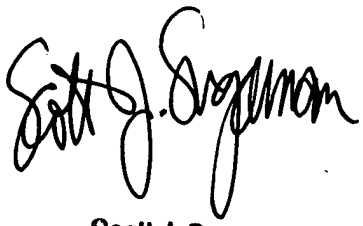

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